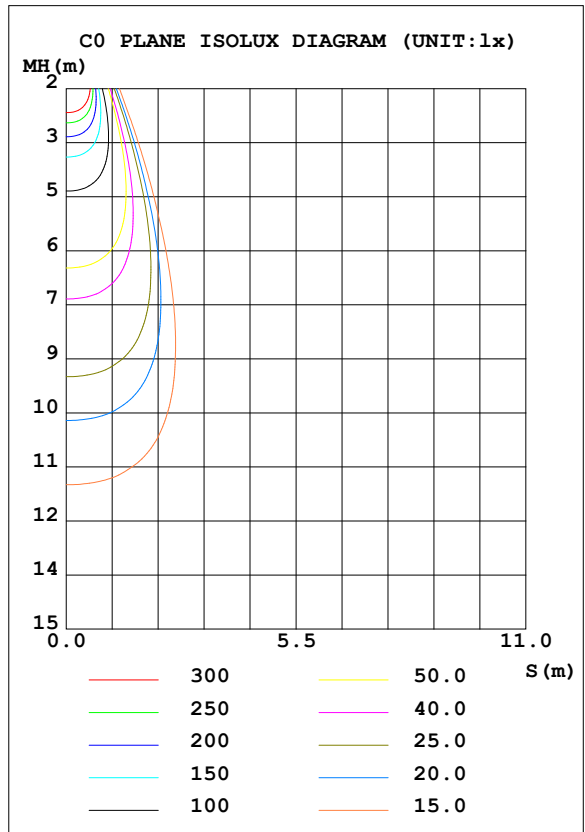
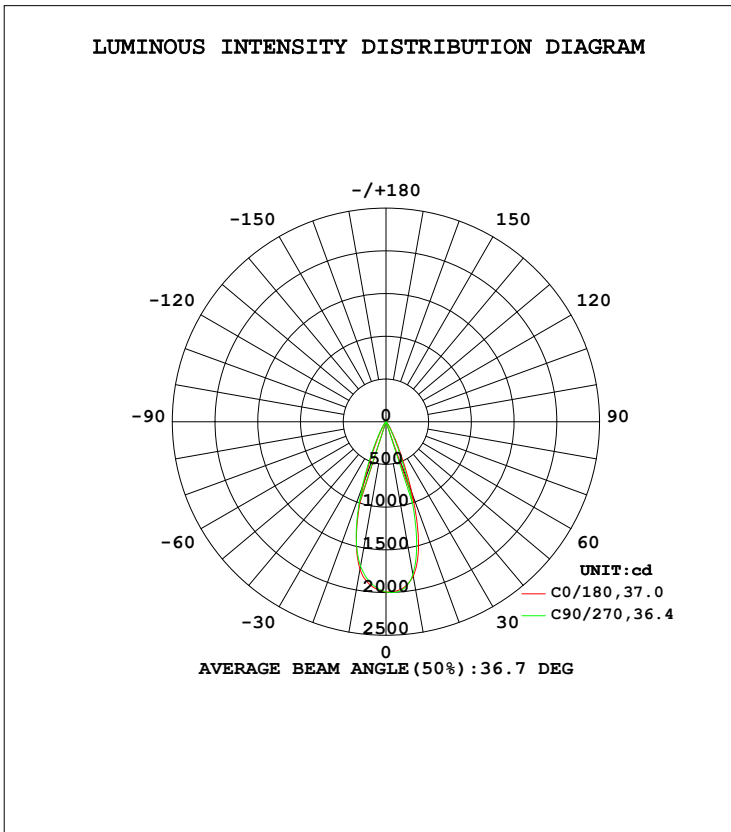


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 92.65 lm/W			
MODEL	XTCATO-3000K	I <sub>max</sub> (cd)	2000	S/MH (C0/180)	0.55
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	0.57
RATED VOLTAGE (V)	36	TOTAL FLUX (lm)	765.98	η UP, DN (C0-180)	0.0,51.1
NOMINAL FLUX (lm)	765.979	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0,48.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	34	η down (%)	100.0	CIBSE SHR MAX	0.55



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Jasoan  
 Test Date: 2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity: 58%  
 Test Distance: 9.016m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	1834	1813	1753	1715					0- 10	180.8	180.8	23.6,23.6
20	889.5	757.2	743.8	816.8					10- 20	367.1	547.8	71.5,71.5
30	149.3	119.7	116.7	153.1					20- 30	168.4	716.2	93.5,93.5
40	29.48	24.89	24.64	31.44					30- 40	41.49	757.7	98.9,98.9
50	1.231	0.9051	1.057	1.550					40- 50	7.759	765.5	99.9,99.9
60	0.2230	0.1523	0.1843	0.2418					50- 60	0.3720	765.8	100,100
70	0.0445	0.0191	0.0191	0.0510					60- 70	0.0926	765.9	100,100
80	0.0254	0.0191	0.0191	0.0254					70- 80	0.0267	766.0	100,100
90	0.0191	0.0191	0.0191	0.0191					80- 90	0.0229	766.0	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

Conical surface Flux(90deg): 763.76 lm

%lum = 99.7%  
 %lamp = 99.7%

Conical surface Flux(120deg): 765.84 lm

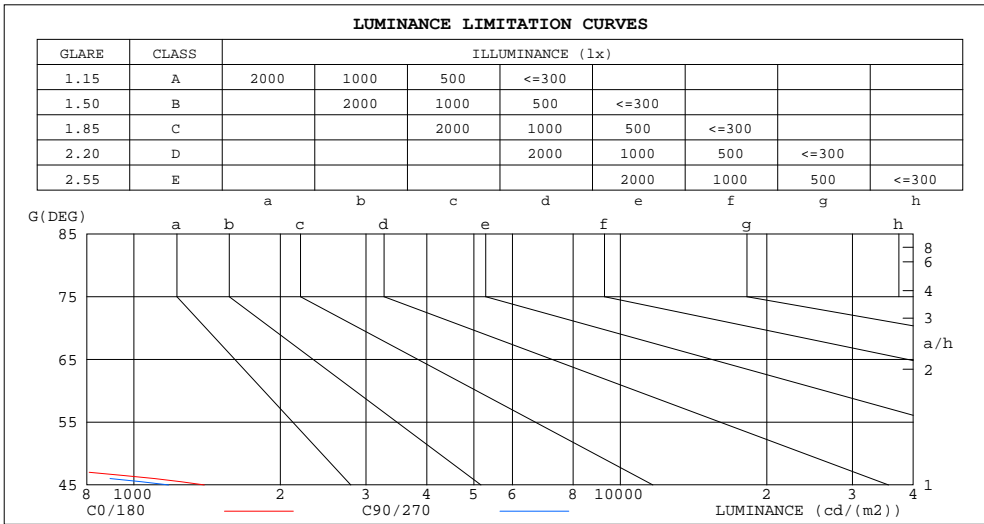
%lum = 100.0%  
 %lamp = 100.0%

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity:58%  
 Test Distance:9.016m [K=1.0000]  
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	32	24
80	16	12
75	11	8
70	14	6
65	26	10
60	49	33
55	75	57
50	209	154
45	1395	1179

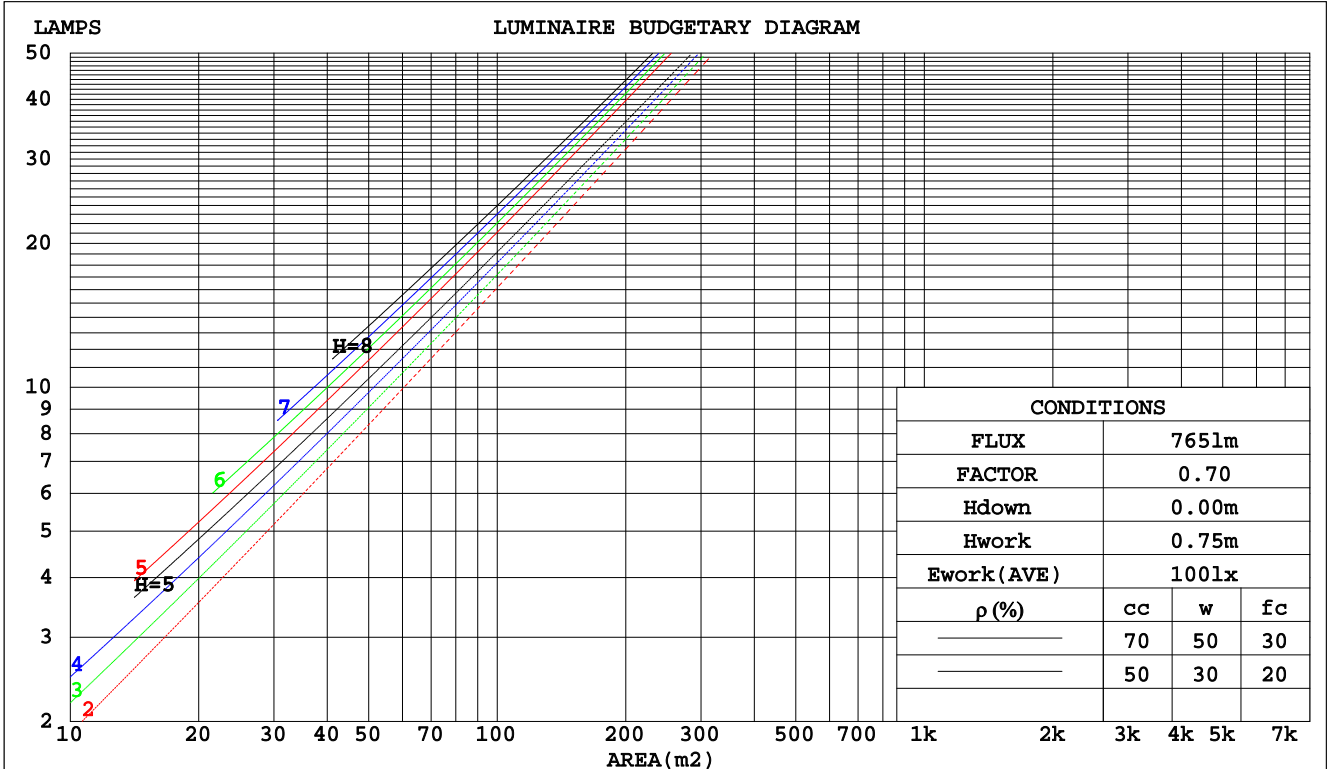
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Jasoan  
 Test Date: 2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity: 58%  
 Test Distance: 9.016m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.12	1.10	1.09	1.10	1.08	1.07	1.06	1.05	1.04	1.03	1.02	1.01	.99	.98	.98	.96
2.0	1.07	1.03	1.01	1.05	1.02	.99	1.02	.99	.97	.99	.97	.95	.96	.95	.93	.92
3.0	1.02	.98	.95	1.00	.97	.94	.98	.95	.92	.95	.93	.91	.93	.91	.90	.88
4.0	.97	.93	.89	.96	.92	.89	.94	.91	.88	.92	.89	.87	.90	.88	.86	.85
5.0	.93	.88	.85	.92	.88	.85	.90	.87	.84	.89	.86	.83	.87	.85	.83	.81
6.0	.89	.84	.81	.88	.84	.81	.87	.83	.80	.86	.82	.80	.84	.82	.79	.78
7.0	.86	.81	.78	.85	.81	.78	.84	.80	.77	.83	.79	.77	.82	.79	.76	.75
8.0	.82	.78	.75	.82	.77	.74	.81	.77	.74	.80	.76	.74	.79	.76	.74	.73
9.0	.79	.75	.72	.79	.75	.72	.78	.74	.71	.77	.74	.71	.77	.73	.71	.70
10.0	.77	.72	.69	.76	.72	.69	.76	.72	.69	.75	.71	.69	.74	.71	.69	.68



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Jasoan  
 Test Date: 2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity: 58%  
 Test Distance: 9.016m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.146	.083	.026	.139	.079	.025	.127	.073	.023	.115	.067	.021	.105	.061	.020	
2.0	.136	.075	.023	.131	.072	.022	.121	.067	.021	.111	.062	.019	.102	.058	.018	
3.0	.128	.068	.020	.123	.066	.020	.115	.062	.019	.107	.059	.018	.099	.055	.017	
4.0	.121	.063	.018	.117	.061	.018	.110	.058	.017	.103	.055	.017	.096	.052	.016	
5.0	.114	.058	.017	.111	.057	.017	.105	.055	.016	.099	.052	.016	.093	.050	.015	
6.0	.109	.055	.016	.106	.054	.015	.101	.052	.015	.095	.050	.015	.091	.048	.014	
7.0	.104	.051	.015	.101	.050	.014	.097	.049	.014	.092	.047	.014	.088	.046	.013	
8.0	.099	.049	.014	.097	.048	.014	.093	.046	.013	.089	.045	.013	.085	.044	.013	
9.0	.095	.046	.013	.093	.045	.013	.090	.044	.013	.086	.043	.012	.083	.042	.012	
10.0	.092	.044	.012	.090	.043	.012	.087	.042	.012	.083	.041	.012	.080	.040	.012	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.169	.158	.147	.145	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.117	.130	.114	.101	.089	.079	.070	.051	.046	.041	.016	.015	.013	
3.0	.137	.113	.094	.118	.098	.082	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.125	.098	.077	.107	.085	.067	.074	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.115	.086	.064	.099	.074	.056	.068	.052	.040	.039	.031	.023	.013	.010	.008	
6.0	.107	.076	.054	.092	.066	.047	.063	.046	.033	.037	.027	.020	.012	.009	.007	
7.0	.100	.068	.046	.086	.059	.040	.059	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.093	.062	.040	.080	.053	.035	.056	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.088	.056	.034	.076	.049	.030	.053	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.083	.051	.030	.072	.045	.026	.050	.031	.019	.029	.019	.011	.009	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity:58%  
 Test Distance:9.016m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	6.4	7.2	6.6	7.3	7.5	5.6	6.3	5.8	6.5	6.6
3H	6.3	6.9	6.5	7.1	7.3	5.4	6.1	5.7	6.3	6.5
4H	6.2	6.8	6.5	7.0	7.3	5.4	6.0	5.6	6.2	6.4
6H	6.1	6.7	6.4	6.9	7.2	5.3	5.9	5.6	6.1	6.3
8H	6.1	6.6	6.4	6.9	7.1	5.2	5.8	5.5	6.1	6.3
12H	6.0	6.6	6.3	6.8	7.1	5.2	5.7	5.5	6.0	6.3
4H 2H	6.2	6.8	6.5	7.0	7.3	5.4	6.0	5.6	6.2	6.4
3H	6.0	6.6	6.3	6.8	7.1	5.2	5.7	5.5	6.0	6.3
4H	5.9	6.4	6.3	6.7	7.0	5.1	5.6	5.4	5.9	6.2
6H	5.8	6.3	6.2	6.6	6.9	5.0	5.4	5.4	5.8	6.1
8H	5.8	6.2	6.2	6.5	6.9	4.9	5.4	5.3	5.7	6.1
12H	5.7	6.1	6.1	6.5	6.9	4.9	5.3	5.3	5.6	6.0
8H 4H	5.8	6.2	6.2	6.5	6.9	4.9	5.4	5.3	5.7	6.1
6H	5.7	6.0	6.1	6.4	6.8	4.8	5.2	5.2	5.6	6.0
8H	5.6	5.9	6.0	6.3	6.8	4.8	5.1	5.2	5.5	5.9
12H	5.5	5.8	6.0	6.2	6.7	4.7	5.0	5.2	5.4	5.9
12H 4H	5.7	6.1	6.1	6.5	6.9	4.9	5.3	5.3	5.6	6.0
6H	5.6	5.9	6.0	6.3	6.8	4.8	5.1	5.2	5.5	5.9
8H	5.5	5.8	6.0	6.2	6.7	4.7	5.0	5.2	5.4	5.9
Variations with the observer position at spacings:										
S = 1.0H	+ 3.8 / -22.8					+ 3.5 / -23.7				
1.5H	+ 6.4 / -20.7					+ 6.1 / -20.5				
2.0H	+ 8.5 / -14.4					+ 8.4 / -14.9				

CIE Pub.117, 766.0 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -0.9)  
 Area: 0.00915624 m2

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity:58%  
 Test Distance:9.016m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

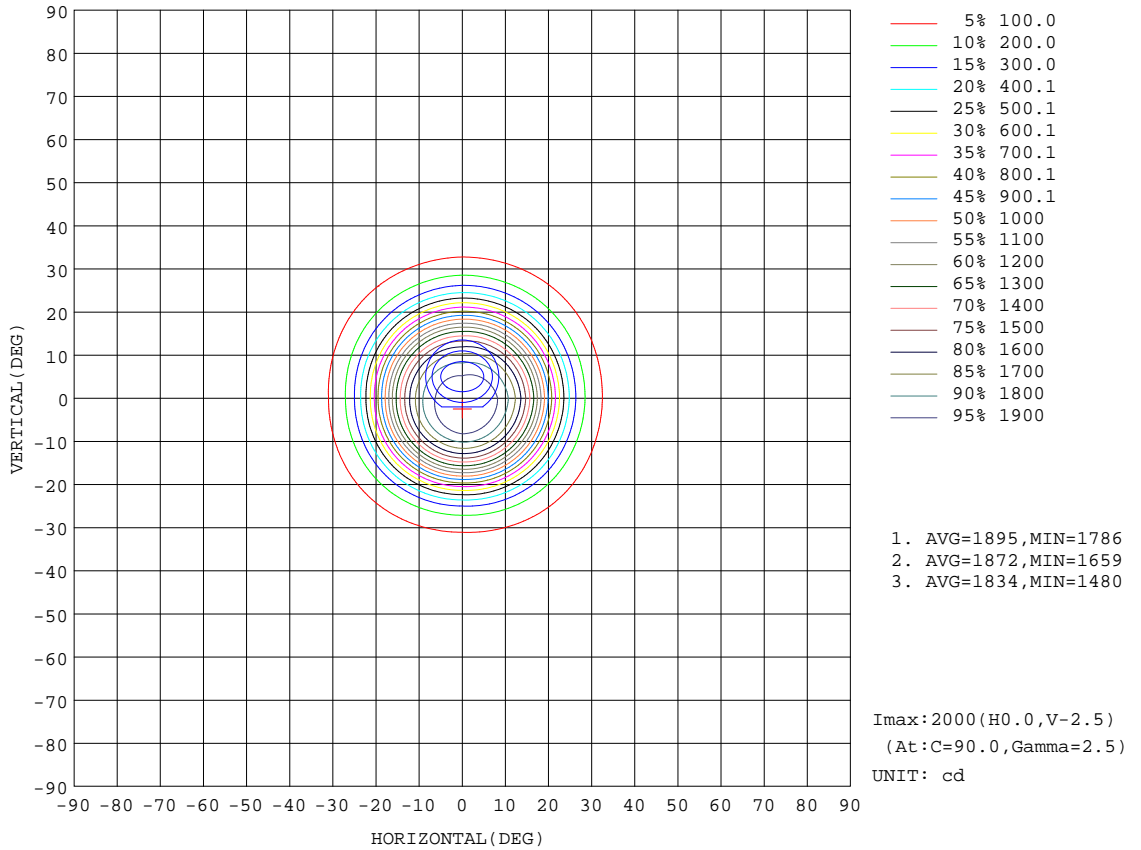
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	91	85	82	90	85	82	90	85	82	78
0.80	98	93	89	97	92	89	96	92	89	86
1.00	102	97	93	101	96	93	99	96	93	89
1.25	105	101	97	104	100	97	102	99	96	92
1.50	108	103	100	106	103	100	104	101	99	95
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	107	104	107	104	102	97
3.00	113	110	107	111	108	106	108	106	104	98
4.00	115	112	110	113	110	109	109	107	106	99
5.00	116	114	112	114	112	110	110	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity:58%  
 Test Distance:9.016m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2024-05-22

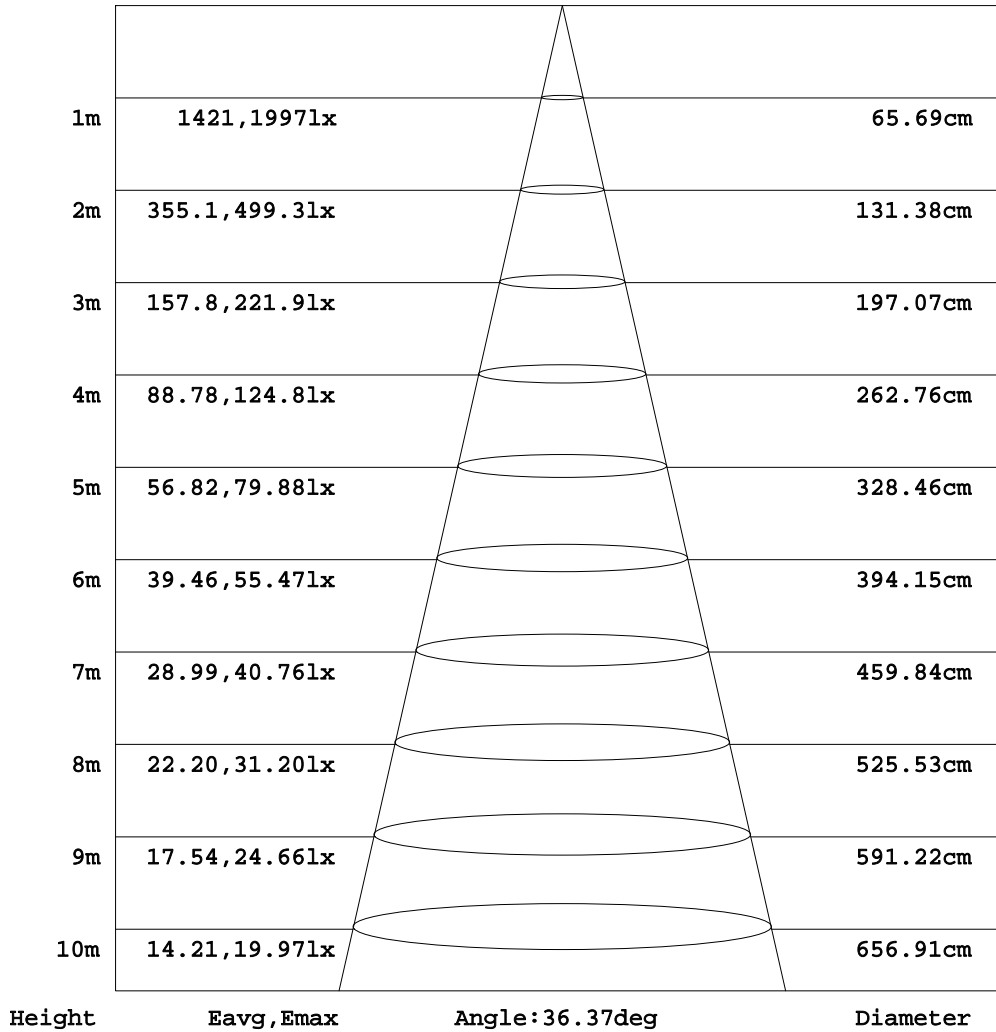
γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity:58%  
 Test Distance:9.016m [K=1.0000]  
 Remarks:



AAI Figure

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

Flux out:499.6 lm



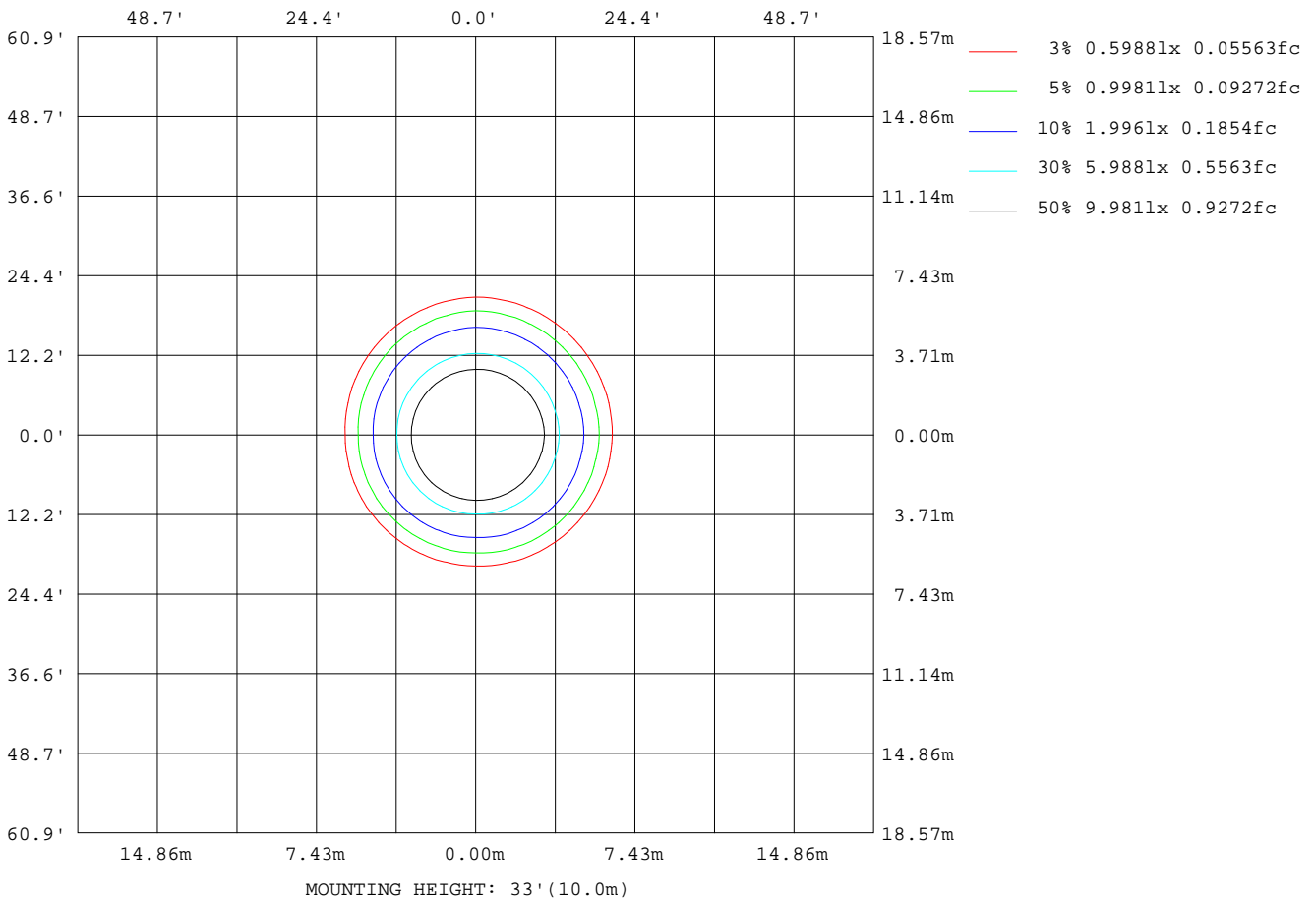
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity:58%  
 Test Distance:9.016m [K=1.0000]  
 Remarks:

ISOLUX DIAGRAM

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity:58%  
 Test Distance:9.016m [K=1.0000]  
 Remarks:

LED Avg.L Report

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

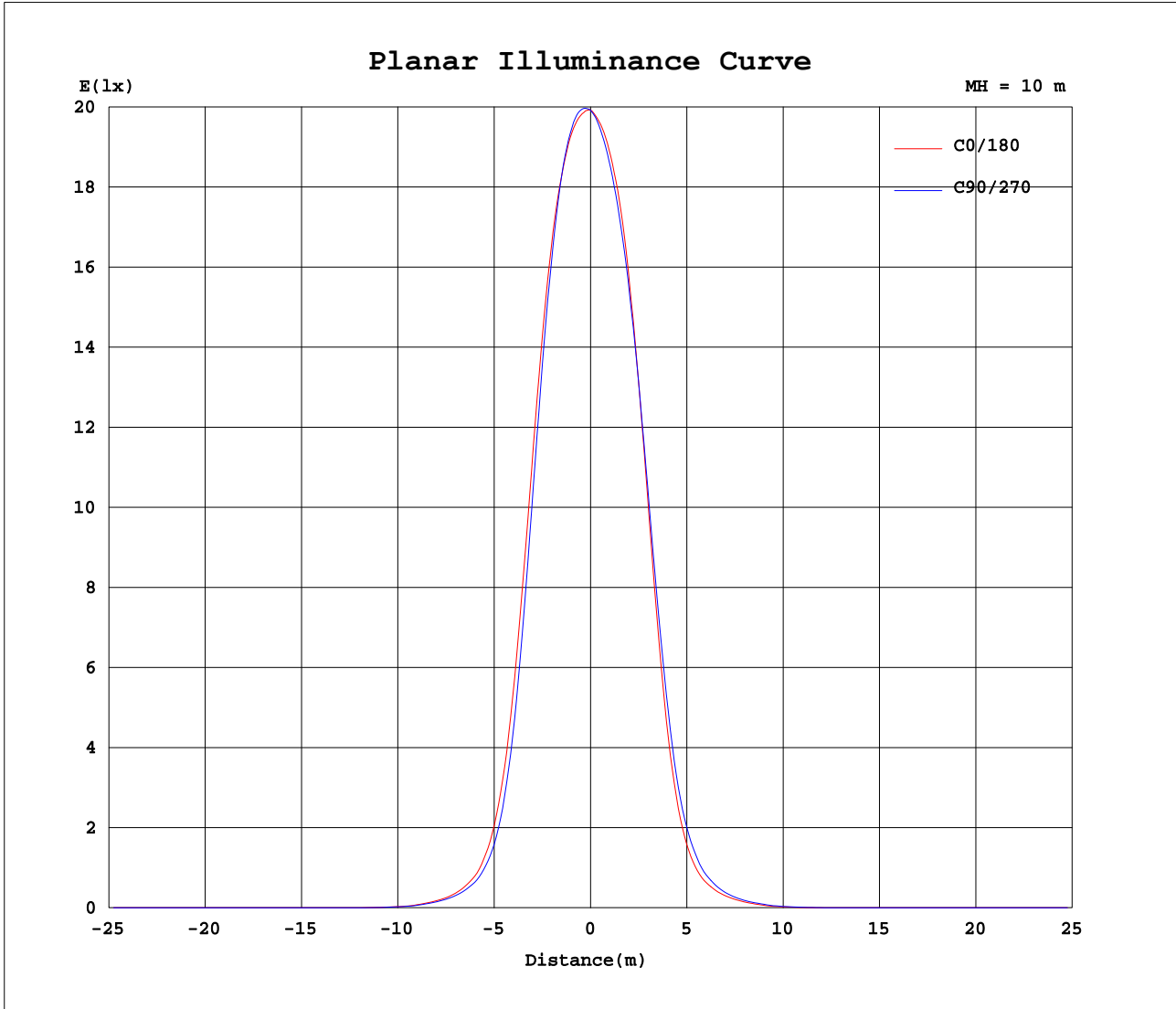
AvgL	cd/m2
L_0~180 (65) av	22
L_0~180 (75) av	9
L_0~180 (85) av	28
L_90~270 (65) av	21
L_90~270 (75) av	9
L_90~270 (85) av	24
L_45 (65) av	21
L_45 (75) av	9
L_45 (85) av	25

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2024-05-22

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
 Humidity:58%  
 Test Distance:9.016m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jasoan  
Test Date: 2024-05-22

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
Humidity: 58%  
Test Distance: 9.016m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:33.070V I:0.2500A P:8.2675W PF:1.0000 Freq:0Hz Lamp Flux:765.979x1 lm		
NAME: XDL E4-WRA-L19030-36DW	TYPE:Downlight	SERIAL No.:
SPEC.: XOB CRI 90 3000K	DIM.: φ108mm*H126mm	
MFR.: SBC XICATO CORP.		

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270																
0	1992	1992	1992	1992																
5	1970	1985	1932	1905																
10	1834	1813	1753	1715																
15	1471	1376	1336	1347																
20	890	757	744	817																
25	387	301	299	367																
30	149	120	117	153																
35	66.8	55.9	54.7	69.6																
40	29.5	24.9	24.6	31.4																
45	9.03	7.63	7.36	10.3																
50	1.23	0.91	1.06	1.55																
55	0.39	0.30	0.35	0.40																
60	0.22	0.15	0.18	0.24																
65	0.10	0.04	0.07	0.13																
70	0.04	0.02	0.02	0.05																
75	0.03	0.02	0.02	0.03																
80	0.03	0.02	0.02	0.03																
85	0.03	0.02	0.02	0.02																
90	0.02	0.02	0.02	0.02																

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2024-05-22

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.421  
Humidity:58%  
Test Distance:9.016m [K=1.0000]  
Remarks: